Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

BULLETIN

OF THE

AMERICAN GEOGRAPHICAL SOCIETY

Vol. XLIV **1912** **No. 3**

RECENT ANTARCTIC DISCOVERIES

BY

EDWIN SWIFT BALCH

The month of March, 1912, must always shine bright for all geographers interested in Antarctic exploration. For in its first week the news was flashed round the world that the South Pole had been reached, and in its second week the further news came of the revisiting of Wilkes Land. These are both great events in the history of geographical discovery, and while it is still too early to speak definitely of their entire import, yet one may at least forecast it in a preliminary way.

Roald Amundsen, who had the slimmest possible financial backing, sailed from Norway in 1910, on the *Fram,* intending apparently to go into the Arctic Ocean through Bering Strait. On the way he suddenly changed his mind and started for the South Pole. With seven companions, he landed, towards the end of January, 1911, at the eastern end of the Great Ice Barrier and established in 78° 30′ S., near Balloon Bight or the Bay of Whales, winter quarters, which they called Framheim. Before the *Fram* returned north she reached 78° 41′ S. and thus has the furthest south as well as the furthest north record of any ship. Between February 10, and April 11, 1911, the land party established in 80°, 81° and 82° S., three depôts of supplies on the Barrier. The winter was spent on the Barrier. There was little snow and there was open water close by throughout the winter, although the temperatures were very low. There were only two moderate storms but many Auroras Australes.

For his journey over the ice, Amundsen, like Arctic travelers, pinned his faith to dogs instead of ponies, and he also used skis. Probably the life-long training on skis of Amundsen and his comrades in the Norwegian mountains had much to do with their success, as they were all experts and running about on skis was second nature to them.

In September, 1911, Amundsen started south, but the weather proved still too cold for the dogs, and he promptly returned to Framheim.

On October 20, 1911, Amundsen started again with four others. They headed Polewards over the Barrier, erecting snow cairns to guide them on their return trip. They passed their depôts and had excellent sledging. On November 9, in about 83° S., they sighted the mountains of Victoria Land. On November 11, they discovered a range of mountains running from Victoria Land towards King Edward Land. These formed a sort of bight in about 86° S., and this is apparently the southernmost point of the Barrier. The new mountain range is estimated as some 850 kilometers in length and received the name of Queen Maud Range.

On November 16, the party reached the edge of the Barrier in 85° S., where they established another depôt. On Nov. 18, they began to climb the coastal ranges. They traveled up several glaciers, some of them steep and difficult. Peaks from 10,000 to 15,000 feet in height were in sight. But until Amundsen publishes a chart, the geography of this locality cannot be clearly understood. The main glacier they traversed was called Axel Heiberg Glacier. On Nov. 22, they reached an altitude of 10,600 feet, and had, on account of a blizzard, to spend four days at this spot. After this experience, they continued south, the altitude gradually dropping. On Nov. 29, they were in 86° 21′ S., at an altitude of 8,000 feet, with another range before them to surmount. This they did in three days, going up a broken glacier, which was named the Devil's Glacier.

At the top of this glacier, the going was very hard. The ice was hummocky and full of concealed holes, into which one man and two dogs fell, but from which fortunately they were pulled out; and on this ice, skis could not be used. This place was called the Devil's Dancing Room. On Dec. 6, they reached their greatest altitude, 10,750 feet, in 87° 40′ S. From here on their road lay over a level ice plateau. On Dec. 8, they passed Shackleton's most southern latitude; on Dec. 11, they reached 89° 15′ S.; on Dec. 12, 89° 30′ S.; on Dec. 13, 89° 45′ S.; on Dec. 14, 89° 55′ S. The following day they took a series of careful observations in beautiful weather, and then traveled the remaining 9 kilometers, arriving at the actual South Pole during the night of Dec. 15-16.

The South Pole is situated on a great ice plateau, which was named King Haakon VII Plateau, a name which must be held to include the ice cap in all directions beyond 89° S. The temporary camp was named Polheim. Here they stayed until Dec. 17, making more careful observations.

On Dec. 17 the explorers started back, and favorable weather made the return journey easier than the journey to the Pole. They reached Framheim on January 25, 1912.

While Amundsen and his party were away south, Lieutenant Prestud and two others made a trip to King Edward Land, confirming Captain Scott's observations and bringing back numerous geological specimens.

The *Fram* arrived at the Bay of Whales on January 9, and on January 16, the Japanese expedition also arrived there and landed on the Barrier. The *Fram* then left the Bay of Whales on January 30, and, after a slow voyage with contrary winds, arrived at Hobart, Tasmania, on March 7, 1912.

Of the services to geography of Amundsen in the South Polar regions, one must write with the most unstinted praise and admiration. While it is impossible to draw absolutely final conclusions about them until Amundsen publishes some charts and until Scott's results are announced, it may be stated now that Amundsen has solved more problems and more important problems than anyone else. The main results of Amundsen's well planned trip are five in number:—the attainment of the South Pole: the discovery that Antarctica is one continent and not two land masses: the settlement of the boundaries of the Great Ice Barrier: the discovery of 500 miles of the coast line of West Antarctica: the discovery that the ocean does not wholly freeze over in the far south.

The attainment of the South Pole was a great physical feat. It is a feather in Amundsen's cap and will doubtless remain his most enduring title to fame. It was the greatest geographical prize remaining, and Amundsen well deserves any honors he may receive for it, even if, and it does not seem likely, Scott reached it first. Amundsen's journey was well conceived and admirably carried out. It seems strange, however, that Amundsen's was only the third definite attempt to reach the South Pole. First came Scott, then Shackleton, then Amundsen. Their journeys followed the law of evolution, Scott breaking the way for Shackleton, and Shackleton in turn doing so for Amundsen. The discovery of the South Pole is a most important discovery, and all geographers of to-day must feel pleased that it was made in their lifetime. Is it as important, however, geographically and scientifically as the solving of the mysteries of the continent and of the Ice Barrier?

In considering whether the most important result of Amundsen's trip is not the settling of the question of Antarctica being one or two land masses, it is necessary to look back a little. Since de Gerlache opened the ball of Antarctic scientific investigations, two schools, so to speak, have formed themselves of believers in one land mass or in two land masses. For instance, in 1910, Dr. Penck published, in connection with the Filchner expedition, a map* showing West Antarctica and East Antarctica separated by a blank space between Weddell Sea and Ross Sea, marked "Land oder See?" On the contrary, in 1911, Dr. Bruce published a little chart† showing Antarctica as one mass. The writer himself, remembering Sam Weller's remark, "Not knowing, can't say," has always avoided committing himself on this matter, which at best was mere guesswork. Thanks to Amundsen, the question is settled and there can be no reasonable doubt that Antarctica is one whole continental land mass, with at least two large gulfs in it, something like the Gulf of Carpentaria and the Great Australian Bay in Australia. Wilkes's name The Antarctic Continent and Murray's name Antarctica are therefore thoroughly justified by actual proof.

The next greatest geographical problem solved by Amundsen is that of the Great Ice Barrier. This also has long been a mystery. Some geographers have held that it was bounded by mountains, others that it connected with the icy shores of Weddell Sea. It turns out that it is bounded by mountains. This settles the geographical part of the problem. This does not, however, although much has been learned, settle the scientific part of the problem. The push to the Barrier, which slowly sends its ice northwards, is left unexplained in Amundsen's report. He says of the Axel Heiberg Glacier, which lies beyond the coast mountains, that its broad cracks and open crevices were apparently mostly filled up, as the glaciers in all probability long ago stopped moving. He says nothing, however, of the glaciers abutting directly on to the Barrier. It would seem therefore most probable that it is the innumerable coastal glaciers which flow from the mountains surrounding the Barrier, which supply at least part of the motive power which shoves this immence ice mass forward. If so, and although many of the phenomena—such as how much of the ice is formed by the freezing of the salt water surface and the building up of this ice by long years of snowfall—are unusual and sometimes peculiar to the Antarctic regions, yet it seems now as if the Great Ice Barrier and similar formations sometimes called shelf ice or bay ice must be accepted more than heretofore as being akin to true glaciers.

---

* *Zeitschrift der Ges. für Erdkunde*, Berlin, 1910: republished by Dr. Otto Nordenskjöld; *Die Schwedische Südpolar Expedition*, 1911, p. 66.

† *Polar Exploration*, p. 8.

The mountain range discovered by Amundsen and named by him Queen Maud Range, rises on a land which is as yet nameless. This land is a part of the coast line of West Antarctica, for, between 86° S. and King Edward Land, it forms the eastern shore of the great bay or gulf whose western shore is South Victoria Land, which gulf is known as the Ross Sea in its northern reaches and as the Great Ice Barrier in its southern frozen portion. It is indispensable that this coastal land, some 500 miles long, should have, like all other stretches of the coast of Antarctica, a name of its own, to enable geographers to speak of it distinctively and accurately, and I suggest christening it by its self-evident name of Amundsen Land.

The discovery that there was open water during the winter close to the Barrier is a most interesting fact which no one even dreamed of before now. Everything so far noted as yet, has shown that the surface of the ocean round the Antarctic shores freezes during the winter, and finding open water at that period off the Ice Barrier is most remarkable. Why this should be so with the extremely low temperatures noted at the same time is a mystery, and one offering room for much speculation and further observation.

Almost as interesting as the discoveries of Amundsen are the reported landings, cabled from Tasmania on March 13, 1912, of two parties from the Australian expedition, on the steamship *Aurora,* at two points of Antarctica. One party is under Dr. Mawson, the other under Mr. Wild, both members of Shackleton's expedition. The cablegram stated that one party was at Adélie Land, the other at Termination Land. This is welcome news, for it proves finally and absolutely the existence of Wilkes Land.

The cablegram, however, says that the *Aurora* found no trace of the Clarie coast, from which it is inferred that it was an ice barrier that has broken up since D'Urville discovered it in 1838. We must hope for further information before long on this interesting matter. Wilkes states that beyond the ice barrier, which was about one hundred and fifty feet in height, the outline of the high land could be well distinguished and that he called it Cape Carr. It must also be noted that D'Urville's dates on his Antarctic trip are incorrect and given as one day earlier than they really were, and that it was not D'Urville who discovered the Clarie coast on January 29, 1840, but Lieutenant Ringgold, U. S. N., commanding the

U. S. S. Porpoise of Wilkes' expedition, who did so on January 30, 1840: a fact established by Rear Admiral John E. Pillsbury, U. S. N.*

It is a pity that America let slip her opportunity of herself vindicating the most important geographical discovery ever made by an American, when in 1909 and 1910, a number of scientific societies, among them the American Geographical Society, urged the United States Government to send a Navy expedition to re-explore Wilkes Land. But Americans must be grateful to Dr. Mawson, Mr. Wild, and their Australian comrades, for proving, by the actual treading of its snows, that Wilkes Land exists where Wilkes located it. And we may hope for further news by this time next year.

Charles Wilkes was a New Yorker, born in the City of New York, April 3, 1798. He is certainly one of her most famous sons, whose fame is bound to grow in the centuries to come. Why does not New York take some action to honor him, by putting up a statue or some other memorial to the man who first announced to the world that there is a great Antarctic Continent? There are some good sculptors in New York City to whom such a monument could be safely intrusted.

In looking towards the future, is it not questionable whether the discovery of the South Pole so early in the game is not rather a misfortune than a blessing? To the average person, Antarctic discovery meant reaching the South Pole, and now that the greatest incentive to which appeal could be made has been eliminated, when money is required for further exploration it will be much harder to get, for the average person holds the purse strings. Fortunately there are two other expeditions actually in the Antarctic, that of Dr. Mawson in Wilkes Land, that of Lieutenant Filchner in the Coats Land region, and these may be expected to bring back much valuable knowledge.

But there are other portions of Antarctica of which we still know almost nothing. West Antarctica, between Charcot Land and King Edward Land, from W. long. 75° to W. long. 150°, is a blank on the maps. De Gerlache and Charcot both felt the continental shelf in sounding, the first in the neighborhood of 85° W., the second in about 120° W. But *terra incognita* can still be written there on the charts. So it can be between 15° W. and 85° E., between Coats Land and Kaiser Wilhelm Land, for, except the two landfalls of Biscoe and Kemp at Enderby Land and Kemp Land, nothing whatever is known of that immense area of the surface of the globe. There may be mountain ranges, or ice cap plateaus, or huge gulfs, but no one knows. And unfortunately such problems do not appeal to the public. We can only live in hope that Charcot may find the wherewithal with which to pursue his investigations in West Antarctica, and that some one will undertake the exploration of Western East Antarctica. If an American Antarctic expedition should ever be thought of again, the region in which further effort would now be most fruitful would be precisely that of Western East Antarctica, between Enderby Land and the South Pole.

---

* *The National Geographic Magazine*, Vol. XXI, 1910, pp. 171-173.

Philadelphia, March 20, 1912.

ECONOMIC PROSPECTS OF NEW BRITISH COLUMBIA

BY

FRED. A. TALBOT

Enterprises in British Columbia have hitherto been content chiefly to exploit the mineral and agricultural wealth in the southern part of the province within easy reach of the first Canadian transcontinental railroad. The northern land has commonly been regarded as an inhospitable mountain region capable of little development. Pioneering did not pass beyond the Cariboo gold field district until a few years ago, and even then was attended with considerable hardship and privation.

The physical features of the region were responsible for this neglect. The Canadian Pacific Railway is flanked by the Rocky, Selkirk, and Gold Mountain ranges and a bad bit of alkali plateau where life is quite insupportable. The presence of this narrow but arid belt was sufficient to deter all excepting those interested in mining and prospecting, and kept pioneer farmers from venturing northward. Entrance to the northern land by way of the Fraser River was impossible owing to the cañons and gulches through which the stream rushes at frantic speed, making it unnavigable.

The discovery of gold in the Klondike prompted a few gold seekers to wander from the northern limit of the Cariboo road through the unknown country beyond. Some pushed on from Barkerville, the leading town in the Cariboo gold country, gaining the southern bank of the Fraser River at Giscombe Portage. They crossed the river and then trekked overland for a few miles to Summit Lake, one of